# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377


Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-1/731d/CEMENT/2014-15 Date: 12.01.2015

## TEST REPORT ON CEMENT

| | | |
|---|---|---|
| * CUSTOMER | : | **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore. |
| *AGENCY | : | **Technical Manager,** KRIDL, Bangalore. |
| *NAME OF THE WORK | : | Improvements to Roads and Drains at Gangabhavani Colony in Ward No.08, BBMP, Bangalore. |
| SAMPLE ID | : | Cement |
| SAMPLE RECEIVED ON | : | 10.01.2015 |
| PERIOD OF TESTING | : | 10.01.2015 to 12.01.2015 |

The results of the tests conducted on the cement sample are as follows:

| Sl. No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-2013 |
|---|---|---|---|---|
| 1 | Standard Consistency | IS-4031 (Part -4) 1988(RA-2009) | 30.50 % | - |
| 2 | a) Initial Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 140 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 470 Minutes | Not More than 600 Minutes |
| 3 | Soundness by Le Chartlier Method | IS-4031 (Part-3) 1988(RA-2009) | 1 mm | Not more than 10mm |

*Information is furnished by the Customer/Representative.

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

*********

VISHWANATH .C
Quality Manager


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T-2377


Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-1/731d/SAND-Gradation/2014-15 : 12.01.2015

## TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager,** KRIDL, Bangalore.

* Name of Work : Improvements to Roads and Drains at Gangabhavani Colony in Ward No.08, BBMP, Bangalore.

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 10.01.2015

Date of Testing : 12.01.2015

Total Wt. of Aggregates in gms **1000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Specific Limits as per IS 383-1970 (RA- 2007) | | | |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone-III | Zone-IV |
| 10 | 100 | 100 | 100 | 100 | 100 |
| 4.75 | 94.20 | 90-100 | 90-100 | 90-100 | 95-100 |
| 2.36 | 79.20 | 60-95 | 75-100 | 85-100 | 95-100 |
| 1.18 | 56.30 | 30-70 | 55-90 | 75-100 | 90-100 |
| 600 Micron | 32.70 | 15-34 | 35-59 | 60-79 | 80-100 |
| 300 Micron | 11.20 | 5-20 | 8-30 | 12-40 | 15-50 |
| 150 Micron | 5.20 | 0-10 | 0-10 | 0-10 | 0-15 |

* Information is furnished by the Customer/Representative

**Remarks :** This sample is under Zone-I specific limits.

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T-2377


Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-1/731d/AGG/GR/2014-15 : 12.01.2015

## TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager,** KRIDL, Bangalore.

* Name of Work : Improvements to Roads and Drains at Gangabhavani Colony in Ward No.08, BBMP, Bangalore.

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 10.01.2015

Date of Testing : 12.01.2015

Total Wt. of Aggregates in gms= **10000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Specific Limits as per IS 383-1970 (RA- 2007) | |
|---|---|---|---|
| | | Graded | Single Sized |
| 80 | 100 | 100 | - |
| 63 | 100 | - | 100 |
| 40 | 97.85 | 95-100 | 85-100 |
| 20 | 41.35 | 30-70 | 0-20 |
| 10 | 15.85 | 10-35 | 0-5 |
| 4.75 | 2.90 | 0-5 | - |

* Information is furnished by the Customer/Representative

**Remarks :** This sample is under Graded specific limits.

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/W.No.08/KRIDL/STEEL/2014-15 12.01.2015

## TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the Work : Improvements to Roads and Drains at Gangabhavani Colony in Ward No.08, BBMP, Bangalore.

Date of Test : 12.01.2015

Technical Reference : IS: 1786-2008

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress $N/mm^2$ | Tensile strength (Ultimate stress) $N/mm^2$ | Elongation percent gauge length | | |
| 1 | 10 | 0.62 | 513 | 556 | 13.15 | O.K | O.K |

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T-2377


Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-1/731d/CUBE/2014-15 14.02.2015

## TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

| | |
|---|---|
| * Customer | : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore. |
| * Agency | : **Technical Manager,** KRIDL, Bangalore. |
| * Name of the work | : Improvements to Roads and Drains at Gangabhavani Colony in Ward No.08, BBMP, Bangalore. |
| * Sample ID | : Drain Concrete |
| Size of cubes | : 150mmx150mmx150mm |
| Cross Sectional Area | : 22500 $mm^2$ |
| Technical Reference | : IS: 516-1959 (Reaffirmed 2008) |
| * Grade of Concrete | : $M_{20}$ |
| Compressive Strength as on | : 28th day |
| Sample Received on | : 17.01.2015 |

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 17.01.2015 | 14.02.2015 | 8.196 | 476.5 | 21.18 |
| 2 | 17.01.2015 | 14.02.2015 | 8.250 | 502.2 | 22.32 |
| 3 | 17.01.2015 | 14.02.2015 | 8.394 | 516.3 | 22.95 |

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-1/731d/CUBE/2014-15 17.02.2015

## TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

| | |
|---|---|
| * Customer | : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore. |
| * Agency | : **Technical Manager,** KRIDL, Bangalore. |
| * Name of the work | : Improvements to Roads and Drains at Gangabhavani Colony in Ward No.08, BBMP, Bangalore. |
| * Sample ID | : Pavement Concrete |
| Size of cubes | : 150mmx150mmx150mm |
| Cross Sectional Area | : 22500 $mm^2$ |
| Technical Reference | : IS: 516-1959 (Reaffirmed 2008) |
| * Grade of Concrete | : $M_{20}$ |
| Compressive Strength as on | : 28th day |
| Sample Received on | : 20.01.2015 |

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 20.01.2015 | 17.02.2015 | 8.470 | 478.3 | 21.26 |
| 2 | 20.01.2015 | 17.02.2015 | 8.329 | 499.6 | 22.20 |
| 3 | 20.01.2015 | 17.02.2015 | 8.322 | 522.3 | 23.21 |

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